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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,262

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Hagen Strasser

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EXAMINER

MARC, MCDIEUNEL

ART UNIT

PAPER NUMBER

3664

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,262	Applicant(s) STRASSER ET AL.	
	Examiner MCDIEUNEL MARC	Art Unit 3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 22-30 are pending.
2. The abstract of the disclosure is objected to because of the word “means”, “invention” and the phrase “Use FIG. 1 for the abstract”. Correction is required. See MPEP § 608.01(b).
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), “Sequence Listings” (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

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- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations

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to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

4. The attempt to incorporate subject matter into this application by reference to the claims is ineffective because “The invention relates to a gripping device as specified in the introductory parts of claims 1 and 15, as well as to a method for operating the gripping device as specified in the introductory parts of claims 20 and 21.” should be replaced by appropriate cross reference(s). Appropriate correction is required in the next communication.

5. Also the entire specification contains reference of the claims into what would be considered as the background of the invention. See pages 2-5. Appropriate correction is required in the next communication.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 22-30 are rejected under 35 U.S.C. 102(e) as being anticipated by **Wharton** (U.S. Pat. No. **6,595,052**).

As per claims 22 and 29, **Wharton** teaches a system and an associated method having a robot type that contains gripping device for a manipulation system comprising a robot for receiving parts and feeding a manufacturing plant with a workpiece from a readied stack of workpieces (see col. 15, lines 48-51), the gripping device comprising a gripper head supporting gripping means (see col. 14, lines 37-38, particularly “a work piece holding device for gripping”), and a detection system for detecting a workpiece received by the gripping means (see

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col. 15, lines 37-47, wherein the computer being considered as detection device), and comprising at least one pulse emitter acting upon the workpiece to excite vibrations in the workpiece (see col. 11, line 57 -- to -- col. line -12, wherein “calibrating data recognized by the balancing computer is stored in memory thereof so that subsequent unbalanced wheel assemblies can be balanced by machine 300 with optimized accuracy” considered as a meter for pulse emitter function), and at least one vibration sensor for sensing the vibrations of the workpiece (see col. 11, line 57 -- to -- col. line -12, particularly the “vibration sensors”), and a memory and/or analytical module structured and arranged to conduct a vibration analysis on a vibration signal from said vibration sensor (see col. 11, line 57 -- to -- col. line -12, particularly the memory), wherein the detection system and the memory and/or analytical module jointly form a component part detachably arranged on the gripper head and in communication with a controller of the manufacturing (see col. 11, line 37 -- to -- col. line -12 as noted above) plant via a bus system comprising an (ASi bus)¹ being taken as a cable; wherein the vibration sensor is applied to a surface of the workpiece by a contact pressure-exerting device (being taken as Piezoelectric sensor, wherein according to Globalspec “Piezoelectric sensors measure the electrical potential caused by applying mechanical force to a piezoelectric material. Piezoelectric sensors are used in a variety of pressure-sensing applications. Alumina ceramics, single crystals, and ultrasonic

¹ **ASI-bus cables** – All bus cables provide signal transmission for wider control purposes beyond simple servo-motor functions. ASI-bus (co-developed with Siemens) is a flat 2-core, 1.5 mm² cable which fits into a special module with pins, making it fast and easy to connect within high security systems.

For its mailing/sorting systems, instead of multicore cables, Siemens preferred an easy-to-install cable which could send several control functions to various “addresses” via a simple two-core cable.

AS-I cables are used in network systems for the lowest field level of automation and communication technology. This flat cable consists of two cores which transmit both data and power. The contact is made by special technology by piercing through the outer jacket and core insulation with AS-I modules. A specially designed grooved jacket ensures installations and connection errors are minimized. The jacket provides resistance to oils, grease and refrigeration lubricants. AS-I versions in TPE and PUR are suitable for wet surroundings in machinery, plant construction, machine tools and automotive industry.

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transducers are few examples of piezoelectric materials. A piezoelectric sensor works on the principle of conversion of energy in mechanical and electrical energy forms. When a polarized crystal is put under pressure, some mechanical deformation takes place in the polarized crystal, which leads in the generation of the electric charge. The generated electric charge or the mechanical deformation can then be measured using a piezo sensor. There are many types of piezoelectric sensors. Examples include a piezoelectric accelerometer, piezoelectric force sensors, and piezoelectric pressure sensors. A piezoelectric accelerometer is widely used for OEM applications and is suitable for working at a lower power consumption and wider frequency range. Piezoelectric force sensors are low impedance voltage force sensors designed for generating analog voltage signals when a force is applied on the piezoelectric crystal and are widely used in machines for measuring force. A piezoelectric pressure sensor is also known as piezoelectric sensor pressure. Piezoelectric pressure sensors are used for measuring change in liquid and gases pressure. Other piezoelectric sensors are commonly available.”), whereupon a pulse is applied to the workpiece by the pulse emitter with a contact time of about 200 ms for exciting vibrations (using a contact time of about 200 ms, falls under design choice).

As per claim 23, **Wharton** teaches a robot wherein the pulse emitter is provided with a (piezo sensor)² which does not have any patentable weight for it is a design choice.

² **Piezo sensors** - generate electricity in response to applied stress. When the piezo film is bent from the mechanical neutral axis, a very high strain within the piezopolymer is created and generates a high voltage. Comes wire assembled, ready for immediate connection to the Make Controller.

The sensor has two wires - it doesn't matter which side gets connected to which, but they should be connected to:

- One side to a **VIn** set to **3.3V**.

As per claim 24, **Wharton** teaches a robot wherein data are wirelessly transmitted between the vibration sensor and/or the memory and/or analytical module and/or the controller (see fig. 8, element 352, and col. 11, lines 37-56, wherein transmitting data wirelessly falls under design choice).

As per claim 25, **Wharton** teaches a robot wherein the pulse emitter is formed by a striking tappet acted upon by kinetic energy (see col. line 12, 34-48, wherein vibration energy being taken as kinetic energy).

As per claim 26, **Wharton** teaches a robot wherein the vibration sensor is formed by an (acceleration sensor)³ arranged to be placed onto a surface of the workpiece (see col. 16, lines 10-44).

-
- The other side to an **Analog In**, 0-7.

Piezoelectric sensors measure the electrical potential caused by applying mechanical force to a piezoelectric material. They are used in a variety of pressure-sensing applications

³ Vibration sensors are sensors for measuring, displaying and analyzing linear velocity, displacement and proximity, or **else acceleration**. They can be used on a stand-alone basis, or in conjunction with a data acquisition system. Vibration sensors are available in many forms. They can be raw sensing elements, packaged transducers, or as a sensor system or instrument, incorporating features such as totalizing, local or remote display and data recording.

Vibration sensors can have from one axis to three axes of measurement, the multiple axes typically being orthogonal to each other. These devices work on many operating principles. The most common types of vibration sensors are piezoelectric, capacitance, null-balance, strain gage, resonance beam, piezoresistive and magnetic induction. An alternative to traditional vibration sensors is one manufactured using MEMS technology, a micro-machining technology that allows for a much smaller device and thus package design.

As per claim 27, **Wharton** teaches a robot wherein the acceleration sensor is supported on the gripper head via a contact-pressure-exerting device (see col. 14, lines 37-38, particularly “a work piece holding device for gripping” as noted above).

As per claim 28, **Wharton** teaches a robot wherein the pulse emitter is provided with the vibration sensor (see col. 16, lines 10-29).

As per claim 30, **Wharton** teaches a robot wherein the comparing step comprises comparing the vibration spectrum with reference data so as to determine whether one or more additional workpieces is/are stuck to the workpiece gripped by the gripping device (see col. 15, line 37 -- to -- col. 16, line -44).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MCDIEUNEL MARC whose telephone number is (571)272-6964. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571) 272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/McDieunel Marc/

Examiner, Art Unit 3664

Monday, September 01, 2008

/KHOI TRAN/

Supervisory Patent Examiner, Art Unit 3664